modulating the packet with spread-spectrum modulation.

B1 Cont.

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42. The distributed-network, spread-spectrum method as set forth in claim 33, with the routing step including the step of transmitting, using radio waves, the packet with spread-spectrum modulation.--

**REMARKS**

By this amendment the applicant adds claims 9-42. Claims 1-42 are pending in the application.

The Examiner rejected claims 5-8 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 5,751,791 to Chau et al., in view of U.S. patent no. 5,742,593 to Sharony et al. and U.S. patent no. 6,301,239 to Chuprun et al. The Examiner states that Chau teaches a network comprising a central office to send out data, a hub which transfers data within the network, a plurality of nodes and remote stations for sending and receiving data. The Examiner acknowledges that Chau fails to teach employing the spread-spectrum communications within the network. The Examiner states that Sharony or Chuprun teaches employing spread-spectrum communications within a distributed network for facilitating reliable communications. The Examiner further states that it would have been obvious to modify Chau by employing spread-spectrum communications to facilitate reliable communications.

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Chau teaches a message received at a user's home base to be accessed when the user roams. The present allows a user to access a closest node, with a packet moving from node to node within the distributed system dependent on traffic information at the node from which the packet will leave. Because the next node to which a packet is sent is dependent on traffic information about a multiplicity of neighboring nodes, an entire path of the packet through the distributed network is not determined *a priori*. Chau does not teach or suggest a packet passing through a distributed network, with the path of the packet dependent on traffic information regarding neighboring nodes.

Sharony uses time slots. Sharony does not teach or suggest a packet passing through a distributed network, with the path of the packet dependent on traffic information regarding neighboring nodes.

Chuprun uses an order wire for transmitting side information. If they have a collision, then they retransmit. Chuprun does not teach or suggest a packet passing through a distributed network, with the path of the packet dependent on traffic information regarding neighboring nodes.

Attached are claims 9-42, for insertion to the patent application. Applicant request inserting these pages in the patent application

Additional SMALL ENTITY fees due with this amendment are calculated as follows:

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| | |
|---|---|
| Total Claims (78 - 20) x $9.00 (203) . . . . . | 522.00 |
| Additional Independent Claims (6) x $42.00 (202) . | 252.00 |
| Multiple Dependent Claims $140.00 (204) . . . . | 140.00 |
| Total Amount . . . . . | $914.00 |

Enclosed is a check in the amount of $914.00 for filing the application. If the fee is insufficient for any reason, please charge the deficiency to Deposit Account No. 14-0783. If the fee is in excess for any reason, please credit the excess to Deposit Account No. 14-0783.

Applicant solicits allowance of the claims.

Respectfully submitted,

DAVID NEWMAN CHARTERED

By: David B. Newman

Date: June 17, 2002

David B. Newman, Jr.
Registration No. 30,966

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9. A distributed network, spread-spectrum system, comprising:

a plurality of remote stations;

a plurality of nodes for covering a geographic area, each node in the plurality of nodes for communicating, with one or more remote stations of the plurality of remote stations, using packets having a destination address and modulated with spread-spectrum modulation, with each packet transmitted between a respective node and remote station using radio waves; and

flow-control means for communicating traffic information between a first multiplicity of neighboring nodes of a first node of the plurality of nodes, with the first node capable of communicating a respective packet to a node in the first multiplicity of neighboring nodes, with the traffic information including traffic density at each of the first multiplicity of neighboring nodes, said flow-control means, responsive to the traffic information and to the respective packet, from the first node, having a respective destination address of a respective destination node of the plurality of nodes, for selecting a second node of the first multiplicity of neighboring nodes, said flow-control means for routing, responsive to the traffic information, the respective packet through the second node to the respective destination node.

10. The distributed network, as set forth in claim 9, with said flow-control means for communicating traffic information

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between a second multiplicity of neighboring nodes of the second node, with the second node capable of communication the respective packet to a node in the second multiplicity of neighboring nodes, with the traffic information including traffic density at each of the second multiplicity of neighboring nodes, said flow-control means, responsive to the traffic information and to the respective packet, from the second node, having the respective destination address of the respective destination node, for selecting a third node of the second multiplicity of neighboring nodes, said flow-control means, responsive to the traffic information, for routing the respective packet through the third node to the respective destination node.

11. The distributed network, as set forth in claim 10, with said flow-control means for communicating traffic information between a third multiplicity of neighboring nodes of the third node, with the third node capable of communicating the respective packet to a node in the third multiplicity of neighboring nodes, with the traffic information including traffic density at each of the third multiplicity of neighboring nodes, said flow-control means, responsive to the traffic information and to the respective packet, from the third node, having the respective destination address of the respective destination node, for selecting a fourth node of the third multiplicity of neighboring nodes, said flow-control means,

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responsive to the traffic information, for routing the respective packet through the fourth node to the respective destination node.

12. The distributed network, as set forth in claim 11, with said flow-control means for communicating traffic information between a fourth multiplicity of neighboring nodes of the fourth node, with the fourth node capable of communicating the respective packet to a node in the fourth multiplicity of neighboring nodes, with the traffic information including traffic density at each of the fourth multiplicity of neighboring nodes, said flow-control means, responsive to the traffic information and to the respective packet, from the fourth node, having the respective destination address of the respective destination node, for selecting a fifth node of the fourth multiplicity of neighboring nodes, said flow-control means, responsive to the traffic information, for routing the respective packet through the fifth node to the respective destination node.

13. The distributed network, as set forth in claim 12, with said flow-control means for communicating traffic information between a fifth multiplicity of neighboring nodes of the fifth node, with the fifth node capable of communicating the respective packet to a node in the fifth multiplicity of neighboring nodes, with the traffic information including

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traffic density at each of the fifth multiplicity of neighboring nodes, said flow-control means, responsive to the traffic information and to the respective packet, from the fifth node, having the respective destination address of the respective destination node, for selecting a sixth node of the fifth multiplicity of neighboring nodes, said flow-control means, responsive to the traffic information, for routing the respective packet through the sixth node to the respective destination node.

14. The distributed network, as set forth in claim 13, with said flow-control means for communicating traffic information between a sixth multiplicity of neighboring nodes of the sixth node, with the sixth node capable of communicating a respective packet to a node in the sixth multiplicity of neighboring nodes, with the traffic information including traffic density at each of the sixth multiplicity of neighboring nodes, said flow-control means, responsive to the traffic information and to the respective packet, from the sixth node, having the respective destination address of the respective destination node, for selecting a seventh node of the sixth multiplicity of neighboring nodes, said flow-control means, responsive to the traffic information, for routing the respective packet through the seventh node to the respective destination node.

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15. A distributed network, spread-spectrum system, comprising:

a plurality of remote stations;

a plurality of nodes for covering a geographic area, each node in the plurality of nodes for communicating, with one or more remote stations of the plurality of remote stations, using packets having a destination address and modulated with spread-spectrum modulation, with each packet transmitted between a respective node and remote station using radio waves; and

flow-control means for communicating first traffic information between a first multiplicity of neighboring nodes of a first node of the plurality of nodes, with the first node capable of communicating a respective packet to a node in the first multiplicity of neighboring nodes, with the first traffic information including traffic density at each of the first multiplicity of neighboring nodes, said flow-control means, responsive to the first traffic information and to the respective packet, from the first node, having a respective destination address of a respective destination node of the plurality of nodes, for selecting a second node of the first multiplicity of neighboring nodes, said flow-control means for responsive to the first traffic information, the respective packet through the second node to the respective destination node.

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16. The distributed network, as set forth in claim 15, with said flow-control means for communicating second traffic information between a second multiplicity of neighboring nodes of the second node, with the second node capable of communicating a respective packet to a node in the second multiplicity of neighboring nodes, with the second traffic information including traffic density at each of the second multiplicity of neighboring nodes, said flow-control means, responsive to the second traffic information and to the respective packet, from the second node, having the respective destination address of the respective destination node, for selecting a third node of the second multiplicity of neighboring nodes, said flow-control means, responsive to the second traffic information, for routing the respective packet through the third node to the respective destination node.

17. The distributed network, as set forth in claim 16, with said flow-control means for communicating third traffic information between a third multiplicity of neighboring nodes of the third node, with the third node capable of communicating a respective packet to a node in the third multiplicity of neighboring nodes, with the third traffic information including traffic density at each of the third multiplicity of neighboring nodes, said flow-control means, responsive to the third traffic information and to the respective packet, from the third node, having the respective destination address of the respective

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destination node, for selecting a fourth node of the third multiplicity of neighboring nodes, said flow-control means, responsive to the third traffic information, for routing the respective packet through the fourth node to the respective destination node.

18. The distributed network, as set forth in claim 17, with said flow-control means for communicating fourth traffic information between a fourth multiplicity of neighboring nodes of the fourth node, with the fourth node capable of communicating a respective packet to a node in the fourth multiplicity of neighboring nodes, with the fourth traffic information including traffic density at each of the fourth multiplicity of neighboring nodes, said flow-control means, responsive to the fourth traffic information and to the respective packet, from the fourth node, having the respective destination address of the respective destination node, for selecting a fifth node of the fourth multiplicity of neighboring nodes, said flow-control means, responsive to the fourth traffic information, for routing the respective packet through the fifth node to the respective destination node.

19. The distributed network, as set forth in claim 18, with said flow-control means for communicating fifth traffic information between a fifth multiplicity of neighboring nodes of the fifth node, with the fifth node capable of communicating a

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respective packet to a node in the fifth multiplicity of neighboring nodes, with the fifth traffic information including traffic density at each of the fifth multiplicity of neighboring nodes, said flow-control means, responsive to the fifth traffic information and to the respective packet, from the fifth node, having the respective destination address of the respective destination node, for selecting a sixth node of the fifth multiplicity of neighboring nodes, said flow-control means, responsive to the fifth traffic information, for routing the respective packet through the sixth node to the respective destination node.

20. The distributed network, as set forth in claim 19, with said flow-control means for communicating sixth traffic information between a sixth multiplicity of neighboring nodes of the sixth node, with the sixth node capable of communicating a respective packet to a node in the sixth multiplicity of neighboring nodes, with the sixth traffic information including traffic density at each of the sixth multiplicity of neighboring nodes, said flow-control means, responsive to the sixth traffic information and to the respective packet, from the sixth node, having the respective destination address of the respective destination node, for selecting a seventh node of the sixth multiplicity of neighboring nodes, said flow-control means, responsive to the sixth traffic information, for routing the

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respective packet through the seventh node to the respective destination node.

21. A distributed network, spread-spectrum method, having a plurality of remote stations and a plurality of nodes for covering a geographic area, comprising the steps of:

communicating, between a node of the plurality of nodes and one or more remote stations of the plurality of remote stations, using packets having a destination address and modulated with spread-spectrum modulation, with each packet transmitted between a respective node and remote station using radio waves;

communicating traffic information between a first multiplicity of neighboring nodes of a first node of the plurality of nodes, with the first node capable of communicating a respective packet to a node in the first multiplicity of neighboring nodes, with the traffic information including traffic density at each of the first multiplicity of neighboring nodes;

selecting, responsive to the traffic information and to the respective packet, from the first node, having a respective destination address of a respective destination node of the plurality of nodes, a second node of the first multiplicity of neighboring nodes; and

routing, responsive to the traffic information, the respective packet through the second node to the respective

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destination node.

22. The distributed network, spread-spectrum method, as set forth in claim 21, further comprising the steps:

communicating traffic information between a second multiplicity of neighboring nodes of the second node, with the second node capable of communication the respective packet to a node in the second multiplicity of neighboring nodes, with the traffic information including traffic density at each of the second multiplicity of neighboring nodes;

selecting, responsive to the traffic information and to the respective packet, from the second node, having the respective destination address of the respective destination node, a third node of the second multiplicity of neighboring nodes; and

routing, responsive to the traffic information, the respective packet through the third node to the respective destination node.

23. The distributed network, spread-spectrum method, as set forth in claim 22, further comprising the steps:

communicating traffic information between a third multiplicity of neighboring nodes of the third node, with the third node capable of communicating the respective packet to a node in the third multiplicity of neighboring nodes, with the traffic information including traffic density at each of the

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third multiplicity of neighboring nodes;

selecting, responsive to the traffic information and to the respective packet, from the third node, having the respective destination address of the respective destination node, a fourth node of the third multiplicity of neighboring nodes; and

routing, responsive to the traffic information, the respective packet through the fourth node to the respective destination node.

24. The distributed network, spread-spectrum method, as set forth in claim 23, further comprising the steps:

communicating traffic information between a fourth multiplicity of neighboring nodes of the fourth node, with the fourth node capable of communicating the respective packet to a node in the fourth multiplicity of neighboring nodes, with the traffic information including traffic density at each of the fourth multiplicity of neighboring nodes;

selecting, responsive to the traffic information and to the respective packet, from the fourth node, having the respective destination address of the respective destination node, a fifth node of the fourth multiplicity of neighboring nodes; and

routing, responsive to the traffic information, the respective packet through the fifth node to the respective destination node.

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25. The distributed network, spread-spectrum method, as set forth in claim 24, further comprising the steps:

communicating traffic information between a fifth multiplicity of neighboring nodes of the fifth node, with the fifth node capable of communicating the respective packet to a node in the fifth multiplicity of neighboring nodes, with the traffic information including traffic density at each of the fifth multiplicity of neighboring nodes;

selecting, responsive to the traffic information and to the respective packet, from the fifth node, having the respective destination address of the respective destination node, a sixth node of the fifth multiplicity of neighboring nodes; and

routing, responsive to the traffic information, the respective packet through the sixth node to the respective destination node.

26. The distributed network, spread-spectrum method, as set forth in claim 25, further comprising the steps:

communicating traffic information between a sixth multiplicity of neighboring nodes of the sixth node, with the sixth node capable of communicating a respective packet to a node in the sixth multiplicity of neighboring nodes, with the traffic information including traffic density at each of the

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sixth multiplicity of neighboring nodes;

selecting, responsive to the traffic information and to the respective packet, from the sixth node, having the respective destination address of the respective destination node, for selecting a seventh node of the sixth multiplicity of neighboring nodes; and

routing, responsive to the traffic information, the respective packet through the seventh node to the respective destination node.

27. A distributed network, spread-spectrum method, having a plurality of remote stations and a plurality of nodes for covering a geographic area, comprising the steps of:

communicating, between a node of the plurality of nodes and one or more remote stations of the plurality of remote stations, using packets having a destination address and modulated with spread-spectrum modulation, with each packet transmitted between a respective node and remote station using radio waves;

communicating first traffic information between a first multiplicity of neighboring nodes of a first node of the plurality of nodes, with the first node capable of communicating a respective packet to a node in the first multiplicity of neighboring nodes, with the first traffic information including traffic density at each of the first multiplicity of neighboring nodes;

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selecting, responsive to the first traffic information and to the respective packet, from the first node, having a respective destination address of a respective destination node of the plurality of nodes, a second node of the first multiplicity of neighboring nodes; and

routing, responsive to the first traffic information, the respective packet through the second node to the respective destination node.

28. The distributed network, spread-spectrum method, as set forth in claim 27, further comprising the steps:,

communicating second traffic information between a second multiplicity of neighboring nodes of the second node, with the second node capable of communicating a respective packet to a node in the second multiplicity of neighboring nodes, with the second traffic information including traffic density at each of the second multiplicity of neighboring nodes;

selecting, responsive to the second traffic information and to the respective packet, from the second node, having the respective destination address of the respective destination node, a third node of the second multiplicity of neighboring nodes; and

routing, responsive to the second traffic information, the respective packet through the third node to the respective destination node.

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29. The distributed network, spread-spectrum method, as set forth in claim 28, further comprising the steps:

communicating third traffic information between a third multiplicity of neighboring nodes of the third node, with the third node capable of communicating a respective packet to a node in the third multiplicity of neighboring nodes, with the third traffic information including traffic density at each of the third multiplicity of neighboring nodes;

selecting, responsive to the third traffic information and to the respective packet, from the third node, having the respective destination address of the respective destination node, a fourth node of the third multiplicity of neighboring nodes; and

routing, responsive to the third traffic information, the respective packet through the fourth node to the respective destination node.

30. The distributed network, spread-spectrum method, as set forth in claim 29, further comprising the steps:

communicating fourth traffic information between a fourth multiplicity of neighboring nodes of the fourth node, with the fourth node capable of communicating a respective packet to a node in the fourth multiplicity of neighboring nodes, with the fourth traffic information including traffic density at each of the fourth multiplicity of neighboring nodes;

selecting, responsive to the fourth traffic

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information and to the respective packet, from the fourth node, having the respective destination address of the respective destination node, a fifth node of the fourth multiplicity of neighboring nodes; and

routing, responsive to the fourth traffic information, the respective packet through the fifth node to the respective destination node.

31. The distributed network, spread-spectrum method, as set forth in claim 30, further comprising the steps:

communicating fifth traffic information between a fifth multiplicity of neighboring nodes of the fifth node, with the fifth node capable of communicating a respective packet to a node in the fifth multiplicity of neighboring nodes, with the fifth traffic information including traffic density at each of the fifth multiplicity of neighboring nodes;1

selecting, responsive to the fifth traffic information and to the respective packet, from the fifth node, having the respective destination address of the respective destination node, a sixth node of the fifth multiplicity of neighboring nodes; and

routing, responsive to the fifth traffic information, the respective packet through the sixth node to the respective destination node.

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32. The distributed network, spread-spectrum method, as set forth in claim 31, further comprising the steps:

communicating sixth traffic information between a sixth multiplicity of neighboring nodes of the sixth node, with the sixth node capable of communicating a respective packet to a node in the sixth multiplicity of neighboring nodes, with the sixth traffic information including traffic density at each of the sixth multiplicity of neighboring nodes;

selecting, responsive to the sixth traffic information and to the respective packet, from the sixth node, having the respective destination address of the respective destination node, a seventh node of the sixth multiplicity of neighboring nodes; and

routing, responsive to the sixth traffic information, the respective packet through the seventh node to the respective destination node.

33. The distributed network as set for im claim 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 or 20, with said flow-control means including means for communicating with radio waves.

34. The distributed network as set for im claim 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 or 20, with said flow-control means including means for communicating with spread-spectrum modulation using radio waves.

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35. The distributed-network, spread-spectrum method as set forth in claim 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 or 32, with the routing step including the step of modulating the packet with spread-spectrum modulation.

36. The distributed-network, spread-spectrum method as set forth in claim 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 or 32, with the routing step including the step of transmitting, using radio waves, the packet with spread-spectrum modulation.

37. A distributed network, spread-spectrum system, comprising:

a plurality of remote stations;

a plurality of nodes for covering a geographic area, each node in the plurality of nodes for communicating, with one or more remote stations of the plurality of remote stations, using packets having a destination address and modulated with spread-spectrum modulation, with each packet transmitted between a respective node and remote station using radio waves; and

flow-control means for communicating traffic information between the plurality of nodes, with the traffic information including traffic density at each of the plurality of nodes, said flow-control means, responsive to the traffic information and to a respective packet, from a first node, having a respective destination address of a respective

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destination node of the plurality of nodes, for selecting a path of a multiplicity of nodes through the plurality of nodes to the destination node, said flow-control means for routing, responsive to the traffic information, the respective packet through the path of the multiplicity of nodes to the respective destination node.

38. A distributed network, spread-spectrum method, having a plurality of nodes, comprising the steps of:

communicating, to a respective node of the plurality of nodes, with one or more remote stations of a plurality of remote stations, using packets having a destination address and modulated with spread-spectrum modulation, with each packet transmitted between the respective node and remote station using radio waves;

communicating traffic information between the plurality of nodes, with the traffic information including traffic density at each of the plurality of nodes;

selecting, responsive to the traffic information and to a respective packet, from the respective node, having a respective destination address of a respective destination node of the plurality of nodes, a path of a multiplicity of nodes through the plurality of nodes to the destination node; and

routing, responsive to the traffic information, the respective packet through the path of the multiplicity of nodes to the respective destination node.

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39. The distributed network as set for im claim 37, with said flow-control means including means for communicating with radio waves.

40. The distributed network as set for im claim 37, with said flow-control means including means for communicating with spread-spectrum modulation using radio waves.

41. The distributed-network, spread-spectrum method as set forth in claim 38, with the routing step including the step of modulating the packet with spread-spectrum modulation.

42. The distributed-network, spread-spectrum method as set forth in claim 38, with the routing step including the step of transmitting, using radio waves, the packet with spread-spectrum modulation.

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